



HOW TO...

Scan film with a camera

If you thought your old 35mm slides and negatives were doomed to see out their days in dusty boxes, we've got a nice surprise for you. Mike Bedford explains how to use your digital camera to shed some light on your favourite films

Many flatbed scanners have a transparency adaptor for scanning negatives and slides. But unless the optical resolution is at least 2,400dpi it won't do a very good job at scanning 35mm film. An individual 35mm image is tiny – just 36mm by 24mm – so if you were to scan it at 1,200dpi you would end up with an image of just 1,700x1,134 pixels, or just under two megapixels. However, if your digital camera has a reasonable resolution and a good macro mode, you could use it to scan 35mm slides or negatives, or those old large-format black and white negatives you inherited from your granddad.

BACK TO BASICS

Normally when you take a photograph your camera records the light that reflects off the objects in the scene. Film reflects very little light so it's viewed by passing light through it. To take a photograph of a film, therefore, it must be lit from behind. The light source must be diffused to give an even brightness across the film. If you simply held the film against a window, the camera would show objects outside the window through the transparent parts of the film.

The setup needed is simple enough. Obtain a piece of translucent (not transparent) plastic sheet such as Perspex. Sign-making companies use this material and will probably sell or give you off-cuts. Put the sheet in a window that has a good view of the sky and tape your film to this diffuser sheet, taking care only to allow the tape to come into contact with the film's surround or mounting. Then place your camera on a tripod facing the film. The tripod isn't essential but the focusing is critical, and using a tripod means that once you've got it right for your first shot you can be sure nothing will change with subsequent shots.

Unless you have a digital single lens reflex (SLR) camera – in which case the optical viewfinder is far superior – you should attach a TV to your camera to preview an image via its video-out connector. The large screen will make it much easier to judge when the focus is sharp.

SETTING PRETTY

Select your camera's macro setting and, by adjusting the zoom setting or the distance between the camera and the film, frame the shot so the film fills the camera's field of view but remains in focus. If your camera won't let you get close enough, you can photograph the film from the closest allowable

distance (this will result in a reduced resolution) or buy a close-up filter (around £12 from a specialist camera shop) that attaches to the front of the camera's lens and allows you to get closer to your subject.

You might find the unusual arrangement fools the automatic focusing. It may be easier, therefore, to set the focus manually and move the camera back and forth until the image is sharp. It also helps if you include the edge of the film, which you can crop later, because the writing on this part of the film (film type, manufacturer, frame numbers and so on) makes an excellent focusing aid.

Your camera's programmed automatic exposure mode should give you a correct exposure. However, if it selects a large aperture it would be better, because of the critical focusing, to use the aperture priority exposure mode and select a smaller aperture; this has a larger f-number. Then the depth of field is improved and any slight error in the focusing won't be as obvious.

FINISHING TOUCHES

Whatever type of film you're using, once you've uploaded the images to your PC, the first job is to crop the photograph to remove the edge of the film or the slide mount. What you do next depends on the type of film.

Black-and-white images will look best if you remove any colour to get a true greyscale image, producing more accurate blacks and whites. In Paint Shop Pro, you can do this by clicking Image, Greyscale. In Photoshop Elements, click Image, Mode, Grayscale. If you've photographed a negative, you'll need to invert it to convert blacks to whites

and vice versa. You'll find this in Paint Shop Pro's Adjust menu or Elements' Image, Adjustments menu.

If you're working with a colour negative, inverting it won't immediately give true colours. Colour negatives have an orange cast, so the inverted image will have a blue cast that must be removed. Some packages have an Auto Equalise function that can do a passable job of correcting

the colours. Otherwise, you'll have to do it manually. In Paint Shop Pro, use the Red/Green/Blue filter under Adjust, Colour Balance. Photoshop Elements users should use the Color Cast filter under Enhance, Adjust Color.

The final step is to touch up any blemishes and adjust the brightness and contrast until you get the effect you want. 



▲ Most flatbed scanners with transparency adaptors won't accept large format film such as this negative. But you can photograph a film using your digital camera, then invert it and print it out yourself



▲ The writing on the edge of the film can help you decide when the focusing is sharp. Once you've uploaded it to your PC, you can easily crop it to leave just the photograph

